IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Previously Presented): A separator for an electrochemical cell, comprising:

(A) a flexible perforate support,

(B) a porous first ceramic material which fills the perforations in the support and which

(i) has a pore structure having an average pore size, and

(ii) is suitable for receiving an ion-conducting electrolyte,

wherein

(C) an electrolyte-contactable pore surface of the first porous ceramic material is covered with fine particles of a further material to extend the use life, the average size of the fine particles being in the range from 0.5 to 30% of the average pore size of the ceramic material.

Claim 2 (Original): The separator of claim 1, wherein the material of the fine particles is identical to or different from the porous ceramic material.

Claim 3 (Original): The separator of claim 2, wherein the material of the fine particles is different from the porous ceramic material.

Claim 4 (Previously Presented): The separator of claim 2, wherein the fine particles comprise SiO_2, Al_2O_3, ZrO_2 or SiC.

Claim 5 (Previously Presented): The separator of claim 2, wherein the fine particles comprise Li_2CO_3, Li_3N, $LiAlO_2$ or $Li_xAl_yTi_z(PO_4)_3$, and wherein $1 \leq x \leq 2$, $0 \leq y \leq 1$ and $1 \leq z \leq 2$.

Claim 6 (Previously Presented): The separator of claim 1, comprising an electrolyte for ion conductance.

Claim 7 (Previously Presented): The separator of claim 1, wherein the fine particles are incorporated in the porous first ceramic material and are exposed on the pore surface.

Claim 8 (Previously Presented): The separator of claim 1, wherein the porous first ceramic material is coated with the fine particles.

Claim 9 (Previously Presented): The separator of claim 1, wherein the ceramic material has an average pore size in the range from 50 nm to 5 μm.

Claim 10 (Previously Presented): The separator of claim 1, wherein the porous ceramic material comprising fine particles has a porosity in the range from 10% to 70%.

Claim 11 (Previously Presented): The separator of claim 1, wherein the ceramic material comprises an oxide of zirconium, silicon or aluminum.

Claim 12 (Previously Presented): The separator of claim 1, wherein the first ceramic material is produced by solidifying a slip which contains particles having a large average particle size which determine the pore structure of the ceramic material and also particles

having a smaller average primary particle size which adhere the large particles together in the course of the solidification of the slip.

Claim 13 (Previously Presented): The separator of claim 1, wherein the perforate support comprises polymeric fibers, glass or ceramic.

Claim 14 (Previously Presented): The separator of claim 1, wherein the perforate support comprises fibers.

Claim 15 (Previously Presented): The separator of claim 1, wherein the support comprises fibers and/or filaments from 1 to 150 μm and/or yarn from 3 to 150 μm in diameter.

Claim 16 (Previously Presented): The separator of claim 1, wherein the support is a nonwoven having a pore size from 5 to 500 μm.

Claim 17 (Previously Presented): The separator of claim 1, wherein the separator is stable under service conditions at not less than 100°C.

Claim 18 (Previously Presented): The separator of claim 1, wherein the separator ranges from 10 to 1 000 μm in thickness.

Claim 19 (Previously Presented): The separator of claim 1, wherein the separator tolerates a bending radius down to 100 mm.

Claim 20 (Previously Presented): A process for producing a separator for an electrochemical cell as claimed in claim 1, comprising:

(a) applying a dispersion as a thin layer onto and into a woven and/or nonwoven, the dispersion comprising:

(a1) large ceramic particles whose average particle size provides a pore structure to the thin layer having an average pore diameter,

(a2) fine particles whose average particle size is in the range from 0.5 to 30%, of the average particle size of the ceramic material, and

(a3) optionally, ceramic particles having an average primary particle size which is substantially less than the average particle size of the ceramic particles as per (a1) and (a2); and

(b) solidifying the dispersion at a temperature from 100°C to 680°C to form a separator.

Claim 21 (Previously Presented): The process of claim 20, wherein the dispersion in step (a) further comprises a sol.

Claim 22 (Previously Presented): A process for producing a separator for an electrochemical cell as claimed in claim 1, comprising:

(i) providing a composite formed from a perforated support, and also a porous ceramic material whose pore structure having an average pore size;

(ii) treating the composite with a dispersion of fine particles having an average particle size in the range from 0.5 to 30% of the average pore size in a dispersion medium so that the electrolyte-accessible pore surface of the

composite is coated with the dispersion and the dispersion comprises from 1 to 25% by weight; and

(iii) drying the dispersion at a temperature in the range from 100°C to 680°C so that the coated pore surface is coated with the fine particles.

Claim 23 (Previously Presented): The process of claim 22, wherein the composite is a separator which is obtained by the process of claim 20.

Claim 24 (Previously Presented): The process of claim 20, wherein the dispersion comprises one or more additional components selected from the group consisting of adhesion promoters, dispersing assistants, agents for setting the viscosity, agents for setting the flow properties and other customary assistants for producing dispersions.

Claim 25 (Previously Presented): The process of claim 20, wherein the dispersion medium contains water and the fine particles are hydrolysis-stable element oxide particles.

Claim 26 (Previously Presented): The process of claim 20, wherein the dispersion medium is an anhydrous organic solvent and the fine particles comprise hydrolysis-sensitive materials.

Claim 27 (Previously Presented): The process of claim 20, wherein the ceramic particles comprise a material selected from the group consisting of aluminum oxide, silicon oxide, zirconium oxide and mixtures thereof.

Claim 28 (Previously Presented): An electrochemical cell, a lithium battery, lithium ion battery or a lithium polymer battery, wherein the cell comprises a separator as claimed in claim 1.

Claim 29 (Canceled).

Claim 30 (New): A method of separation for an electrochemical cell, wherein the separator, according to claim 1, is introduced into the cell.

Claim 31 (New): The method of separation according to claim 30, wherein the electrochemical cell is a high power battery.